CLAIMS

What is claimed is:

1. A portable object tracking system for tracking use of individual objects within a group of objects removed as a set, said system comprising:

a system controller for monitoring and recording usage information for the objects;

at least one portable object carrier having a series of object holders mounted thereon for receiving and releasibly mounting each of the objects of the set of objects to be tracked on said object carrier, and a communication link communicating with each said object holder; and

an identifier associated with each object received in said object holders for detecting placement and removal of objects within said object holders.

2. The portable object tracking system of claim 1 and further comprising a storage unit for storing the objects to be tracked, with access to said storage device controlled by said system controller;

3. The portable object tracking system of claim 1 and wherein said object holders each comprise a support bracket mounted to said object carrier and having a contact member adapted to engage said sensor as said sensor is received within said object holder.

4. The portable object tracking system of claim 1 and wherein said object carrier further includes a body through which said data line is extended, a controller linked to said data line, and a series of openings formed through said body and aligned with said data line such that as an object is received within its object holder, said sensor associated with the object contacts said data line to enable said sensor to transmit information regarding use of the object to said controller through said data line.

5. The portable object tracking system of claim 1 and wherein said object holders include an enclosure mounted on said object carrier and having a door hingedly mounted thereto, and a form sensor positioned within said enclosure in a position to detect the presence of said sensor mounted to the object.

6. The portable object tracking system of claim 5 and wherein said sensor mounted to the object being tracked includes a reflector applied to the object.

7. The portable object tracking system of claim 1 and wherein said sensor comprises a touch memory device having an internal timer and memory for registering a period of time.

8. A method of tracking use of individual objects of a set of objects checked out from a storage means, comprising:

placing the individual objects to be tracked in object holders mounted on a portable object carrier;

removing selected ones of the objects from their object holders as needed for use of each object;

detecting the removal of the selected objects from their object holders;

replacing removed objects in their object holders on the object carrier after use; and

determining the use of each object of the set of objects.

9. The method of claim 8 and wherein the step of detecting the removal objects comprises actuating a timer associated with each object of the set of objects as each object is placed in its object holder, stopping each timer upon removal of its object from the object holder, restarting each timer as its object is replaced in the object holder to generate a time record, and the step of determining the use of each object comprises comparing the time record for each

object with a record of time the portable object carrier has been checked out from the storage means to determine individual object of the set of objects was used.

10. The method of claim 8 and wherein the step of determining the use of each individual object comprises detecting the removal of a security ID strap from each individual object.

11. The method of claim 8 and wherein detecting the removal of individual objects comprises polling each object holder of the object carrier to detect the presence of a series of recorded identification codes corresponding to each of the objects of the set of objects.

12. The method of claim 8 and further including addressing each of the objects of the set of objects according to the object holder in which each object is received, inputting an identifier for a desired object, and locating the object holder for the desired object.

13. The method of claim 8 and further comprising sensing the presence of a document received in an object holder, including detecting a reflective tape applied to the document with a sensor mounted within the object holder.

14. A mobile object tracking system for tracking use of individual objects of a set of objects, comprising:

at least one portable object carrier having a series of object holders in which each individual object of the set of objects is received and stored; and

a series of identification tags to which each individual object is mounted, each identification tag being received within one of said object holders, and having means for indicating use of the object applied thereto.

15. The mobile object tracking system of claim 14 and wherein said means for indicating comprises a security ID strap mounted about said identification tag to secure the object against said identification tag and provide a visual indication of use of the object when said security ID strap has been removed from said identification tag.

16. The mobile object tracking system of claim 15 and wherein each said security ID strap includes a bar code for identifying the individual object secured to each identification tag, wherein each said bar code of each said security ID strap is input into said system controller for identifying each individual object that was used.

17. The mobile object tracking system of claim 14 and wherein said means for indicating comprises a memory device having an internal timer for counting a period of time.

18. The mobile object tracking system of claim 17 and wherein said object carrier includes an on-board controller having an internal clock for counting a period of time and which communicates with said system controller to transmit information regarding the periods of time counted by each said memory device for each object stored on said object carrier and said controller of said object carrier to said system controller to determine how long each individual object was used based upon a comparison of the time counted by said memory device associated with each object and the time counted by said controller of said object carrier.

19. The mobile object tracking system of claim 14 and wherein said object carrier includes a controller, a data line extended through said object carrier and linked to said controller, and a series of addressable switches along said data line, aligned with each of said object holders to enable each individual object to be located according to said object holder in which the object is received,

whereby said controller polls said object holders through said data line to determine which objects have been removed from said object holders and for how long such objects have been removed to indicate usage of each object of the set of objects.

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20. The mobile object tracking system of claim 14 and wherein said object holders comprise support brackets mounted to said object carrier and each having a contact member adapted to engage an identification tag received within said receiving slot thereof.

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